

REMARKS

This paper is responsive to a non-final Office action dated March 25, 2004. Claims 1- 32 were examined. Of these, claims 1-27 and 32 were rejected, and claims 28-31 were allowed. By way of the present amendment, claims 19 and 32 are being cancelled and claim 33 is being added.

The Office action indicated that claims 28-31 were allowed, and that claim 22 would be allowable if rewritten in independent form. The Applicant appreciates the allowance of claims 28-31.

The Office action rejected claim 17 under 35 USC § 112, second paragraph, based on a lack of antecedent basis for the claim limitation of "the step of updating a status of the flag." Claim 17 has been amended to correct that informality.

The Office rejected claims 1-2, 5-8, 10-15, 18-19, 21, 23-24, and 32 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 5,579,455 issued to Greene, et al. (hereinafter "Greene '455").

Claim 1 has been amended to recite that a hierarchical image depth buffer containing data items that identify a nearest depth value and a farthest depth value for a first subset of a plurality of image depth buffer entries, the plurality of image depth buffer entries associated with a plurality of corresponding pixels and the data items further include a nearest depth value corresponding to a second subset of the plurality of image depth buffer entries. The Applicant submits that Greene '455 does not teach or suggest claim 1 as amended. Since Greene '455 does not teach or suggest each and every element of amended independent claim 1, particularly the depth values associated with the first and second subsets, the Applicant respectfully requests the Office to withdraw its rejection of claim 1, and allow claim 1 and all claims dependent thereon.

Claim 10 has been amended to recite reading data items from a hierarchical image depth buffer, the data items including a near depth value and a far depth value for a first subset of a set of pixels and a near depth value for a second subset of the set of pixels. Since Greene '455 does not teach or suggest each and every element of amended independent claim 10, particularly the

depth values associated with the first and second subsets, the Applicant respectfully submits that claim 10, and all claims dependent thereon distinguish over the references of record.

Claim 18 has been amended to recite the set of data items includes a near depth value of a foreground subset of the set of pixels, a far depth value of the foreground subset, and a near depth value of a background subset of the set of pixels. . Since Greene '455 does not teach or suggest each and every element of amended independent claim 18, particularly the depth values associated with the foreground and background subsets, the Applicant respectfully submits that claim 18, all claims dependent thereon distinguish over the references of record.

Claim 22 has been put in independent form and contains subject matter that the Office action indicated as allowable.

Claim 24 has been amended to recite that at least one of the hierarchical image depth buffer entries includes multiple near and far values. The Applicant submits that Greene '455 does not teach or suggest hierarchical image depth buffer entries that include multiple near and far values. Since Greene '455 does not teach or suggest each and every element of amended independent claim 24, the Applicant respectfully submits that claim 24, all claims dependent thereon distinguish over the references of record.

Claim 26 stands rejected over Greene '455 in view of Dawson (U.S. Pat. No. 6,567,099). Claim 26 has been put in independent form and recites subject matter Applicants maintain is not taught in Greene '455 in view of Dawson. While Dawson teaches at, e.g., col. 6 lines 34-43 that bit flags in a stand Z-buffer hold information about the current status of the pixel location, neither Greene '455, nor Dawson, alone or in combination, teach a an image depth buffer, a hierarchical image depth buffer, and a third level hierarchical buffer containing a plurality of initialization flags, each of the initialization flags for a super-block of pixels corresponding to a plurality of the entries within the hierarchical image depth buffer. Accordingly, Applicant respectfully submits that claim 26 distinguishes over the art of record.

Claim 32 has been canceled.

New claim 33 has been added and depends from claim 10, which applicants submit is allowable over the art of record.

All claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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Respectfully submitted,



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